

REMARKS

This responds to the Office Action mailed on April 19, 2005.

Claims 1 and 11 are amended, no claims are canceled, and no claims are added; as a result, claims 1-41 are now pending in this application. Applicant notes that the Office Action mailed April 19, 2005 does not list claims 26-35 and 42-45, which remain pending but are currently withdrawn from consideration.

Claim Objections

Claims 1-5 and 11-14 were objected to due to informalities. Applicant has amended independent claims 1 and 11 to correct the noted informalities, and thanks the Examiner for pointing out the inadvertent antecedent basis errors. The amendments included herein are believed to completely respond to the objections, and Applicant requests that this objection be withdrawn.

Information Disclosure Statement

Applicant submitted a Supplemental Information Disclosure Statement and a 1449 Form on April 11, 2005. Applicant thanks the Examiner for consideration of the SIDS, and notes that the Examiner did not receive a copy of the article by Lu et al., "SiGe and SiGeC Surface Alloy Formation Using High-Dose Implantation and Solid Phase Epitaxy". Accordingly, a copy of this reference, and the 1449 Form on which it was listed, are enclosed. Applicant respectfully requests that a completely-initialed copy of the 1449 Form be returned to Applicant's Representatives to indicate that the cited references have been considered by the Examiner.

Applicant is submitting another Information Disclosure Statement and a 1449 Form along with this Response. Applicant respectfully requests that an initialed copy of the 1449 Form be returned to Applicant's Representatives to indicate that the references been considered by the Examiner.

§102 Rejection of the Claims

Claims 1-5 and 11-14 were rejected under 35 U.S.C. § 102(e) for anticipation by Hammond et al. (U.S. 2003/0013323-A1). Applicant respectfully traverses this rejection.

Applicant does not admit that the cited Hammond reference is prior art and reserves the right to swear behind any cited reference at a latter date. The cited reference of Hammond discloses a method of forming buried channel devices and surface channel devices on a hetero-structure substrate by selectively removing silicon germanium alloys.

The Hammond reference discloses using steam oxidation to rapidly oxidize the remaining vertical thickness of the SiGe layer 18 that is left after the disclosed freon and oxygen plasma etch of the strained silicon layer 20, since the oxidation rate decreases by about a factor of four times when the strained silicon layer 16 is reached (Figure 11 and Paragraph 0022). Applicant respectfully submits that the Office Action is incorrect in stating on page 2, fourth and fifth lines from the bottom, that the arrangement of Hammond is “vertically isolating the strained silicon layer from the substrate by undercutting the relaxed SiGe layer and filling an entire area under the relaxed SiGe layer with an electrical insulator (Figures 5-6, and Paragraph 0024)”, and submits that there is nothing in the cited portion of the reference that discusses vertical isolation. The isolation in the cited reference is strictly horizontal isolation as noted in paragraph 0024, where it states that “Isolation trenches 34, 36 and 38 may then be formed to isolate the various regions from one another”. Applicant submits that there is no electrical insulator below the relaxed SiGe layer 18 taught in the cited reference, and that this is easily shown in the figures 3-10, which show that the layer 18 only has the strained silicon layer 16 underneath.

Applicant does not understand which layer the Examiner is referring to on page 3 of the outstanding Office Action, where it states “Hammond et al discloses forming an insulator layer below the semiconductor layers, as shown in Figures 5-6.” Applicant submits that the insulator isolation trenches 34, 36 and 38 cannot be considered to be below the semiconductor layers 14-20, but are rather adjacent to and having a level that extends lower than the semiconductor layers. Whether or not the isolation areas referred to in the outstanding Office Action on page 3 can be considered to be somehow “below” the semiconductor layers, Applicant submits that the Hammond reference does not disclose at least the claimed feature of “...*filling an area under the semiconductive silicon compound layer with an electrical insulator completely separating the strained silicon layer from the semiconductive silicon compound ...*”, as recited in independent claim 1, as amended herein. Similar language is found in independent claim 11.

Therefore Applicant respectfully submits that the cited reference of Hammond does not contain all of the features of the claimed invention, specifically the separation of the semiconductor layer from the substrate by an insulator layer, since there is no undercutting resulting in vertical isolation in the cited reference.

The dependent claims are seen as being in patentable condition at least as depending from base claims shown above to be patentable over the cited reference. In view of the above noted failure of the cited reference to teach each and every feature of the claims, Applicant requests that this rejection be reconsidered and withdrawn.

Allowable Subject Matter

Claims 6-10, 15-25, and 36-41 were allowed. Applicant thanks the Examiner for the indication of patentable subject matter.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney David Suhl at 508-865-8211, or the below-signed attorney at (612) 373-6960, to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

LEONARD FORBES

By his Representatives,

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By 

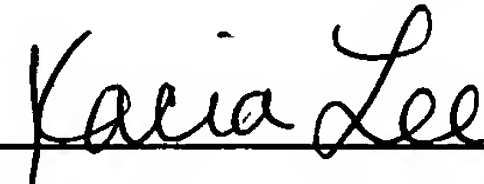
Marvin L. Beekman

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 14 day of July, 2005.

KACIA LEE

Name



Signature